

A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME (STP) ON PREVENTION OF CORONARY ARTERY DISEASE AMONG HYPERTENSIVE PATIENTS IN A SELECTED HOSPITAL BIDAR

Nursing

Abhilash

Ph.D Scholar, Himalayan University, Itanagar, Arunachal Pradesh, India.

Dr. Diana*

Research Supervisor, Department of Nursing, Himalayan University, Itanagar, Arunachal Pradesh, India.*Corresponding Author

ABSTRACT

Introduction: The coronary arteries are at risk for narrowing as cholesterol deposits, called plaques, build up inside the artery. If the arteries narrow enough, blood supply to the heart muscle may be compromised (slowed down), and this slowing of blood flow to the heart causes pain, or angina. **Methods:** The data was generated by using the structured questionnaire. Purposive non-probability sampling techniques were adopted to select 60 subjects. The data was obtained from the study subjects were analyzed and interpreted in terms of the objectives and hypothesis of the study. Descriptive and inferential statistics were used for the data analysis and the level set at 0.05. **Result:** The results of the study shown that pre-test overall knowledge score of patients with hypertension on prevention of coronary artery disease was 43.7%, mean and the standard deviation was 2.3. During post-test overall knowledge score of patients with hypertension on prevention of coronary artery disease was 76.0% mean and standard deviation was 2.7. Hence the difference between pretest and post-test overall knowledge score was 32.3%. So, the results of the study shown the difference between the pre-test and post-test knowledge score of patients with hypertension on prevention of coronary artery disease was statistically significant and the difference is due to the administration of structured teaching programme to patients with hypertension on prevention of coronary artery disease. The analysis revealed that there is significant association was found with – religion, educational qualification, marital status and occupation at $p < 0.05$ and no association could be found with other demographic variables of patients with hypertension on prevention of coronary artery disease. **Discussion:** The results of the study shown the difference between the pre-test and post-test knowledge score of patients with hypertension on prevention of coronary artery disease was statistically significant and the difference is due to the administration of STP to patients with hypertension on prevention of coronary artery disease.

KEYWORDS

Coronary Artery Disease, WHO, CABG & Hypertension.

I. OBJECTIVES OF THE STUDY

1. To assess the knowledge on prevention of coronary artery disease among Hypertensive patients in a selected hospital of Bidar.
2. To develop and administer Structured Teaching Programme (STP) on prevention of coronary artery disease among Hypertensive patients in a selected hospital of Bidar.
3. To evaluate effectiveness of Structured Teaching Programme (STP) regarding prevention of coronary artery disease among Hypertensive patients in a selected hospital of Bidar.
4. To find the association between pre-test and post-test knowledge scores with selected demographic variables.

II. METHODOLOGY

Methodology of research organizes all the components of study in a way that is most likely to lead to valid answers to the problems to have been posed

Research approach:

In the present study an evaluative research approach was used to assess the knowledge of patients with coronary artery disease attending Cardiology out patient department in selected hospital of Bidar.

Research design:

The research design selected for study was a one group pre-test post-test quasi experimental design was best suited to find the knowledge of patients with coronary artery disease attending Cardiology out patient department in selected hospital of Bidar.

Variables under study:

A concept which can take on different qualitative values is called a variable

Independent Variable

Structured teaching programme

Dependent Variable

Knowledge regarding prevention of coronary artery disease among hypertensive patients attending Cardiology out patient department in selected hospital of Bidar.

Population:

The population of the present study consists of patients with

Hypertension attending Cardiology out patient department in selected hospital of Bidar.

Sample and sample size:

The sample of the present study includes patients with Hypertension attending Cardiology out patient department in selected hospital of Bidar.

The sample size of the present study comprises of 60 numbers.

Sampling technique:

Sampling refers to the process of selecting the portion of population to represent the entire population. Non-probability convenient sampling technique was adopted for the present study.

Selection and development of tool:

The instrument selected in research must be the vehicle that obtains the best data for drawing conclusions to the study. The tool act as an instrument to assess and collect the data from the respondents of the study.

The tool was developed based on,

- Past clinical experience of the student investigator.
- Related review of literature (Books, Journals, Periodicals, and articles published and unpublished research studies) was reviewed and used to develop the tool.
- Based on the opinions of the subject experts.
- Based on the objectives of the study, the blue print was prepared under 3 main areas namely knowledge, comprehension and application. The prepared items were subjected to content validation, pre-testing and estimation of reliability.

III. RESULTS

Presentation of Data

The analyzed data has been organized and presented in the following sections: Section 1: Description of socio demographic variables of the caregivers in the experimental and control group.

The analyzed data has been organized and presented in the following sections.

Section A: Description of socio-demographic variable of the patient admitted in selected hospitals at Mandya Dist.

Section B: Analyses and interpretation of pre-test and post-test level of

knowledge of experimental group.

SECTION – I: Socio-demographic characteristic of sample

Distribution of patients with Hypertension according to age (in years)

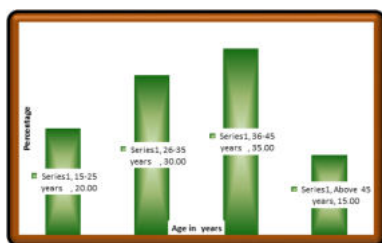


Figure-1: Distribution of patients with Hypertension according to age (in years)

In the above bar diagram, it shows that majority of patients with Hypertension 35% belong to age group of 51-60 years age group. Then 30% of patients with Hypertension belong to 41-50 years age group. Whereas 20% belongs to 30-40 years age group. Only 15% patients with Hypertension belong to age group of above 60 years and above.

Distribution of patients with Hypertension according to gender

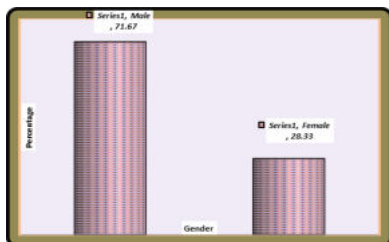


Figure-2: Distribution of patients with Hypertension according to gender

In the above bar diagram, it shows that patients with Hypertension 71.67% are male and 28.33% are females.

Distribution of patients with Hypertension according to religion

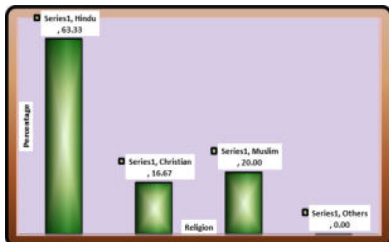


Figure-3: Distribution of patients with Hypertension according to religion

The above diagram shows that 63.33% of patients with Hypertension are Hindus, 16.67% are Christians and 20% are Muslims.

Distribution of patients with Hypertension according to educational qualification

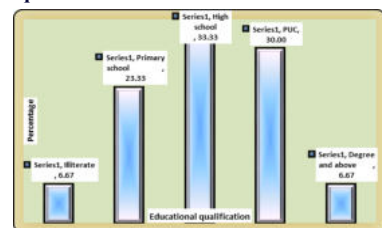


Figure-4: Distribution of patients with Hypertension according to educational qualification

The above bar diagram depicts, majority of patients with Hypertension i.e., 33.3% had studied up to high school. Then, 30% had studied up to

PUC. 23.33 had studied up to primary school. And only 6.67% had studied degree and equal members are illiterate.

Distribution of patients with Hypertension according to marital status

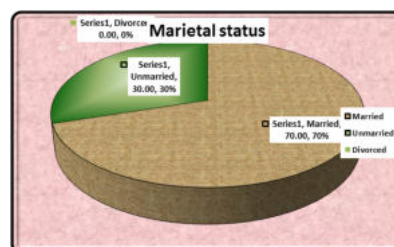


Figure-5: Distribution of patients with Hypertension according to marital status

The above bar diagram depicts, majority of patients with Hypertension i.e., 70% are married and only 30% are unmarried.

Distribution of patients with Hypertension according to occupation

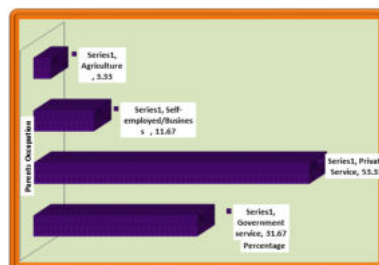


Figure-6: Distribution of patients with Hypertension according to occupation

The above bar diagram depicts majority of patients with Hypertension are in private service i.e., 53.33%. Then, 31.67% are government servants. Whereas 11.67% are self-employed. Only 3.33% are agriculturists.

Distribution of patients with Hypertension according to monthly income

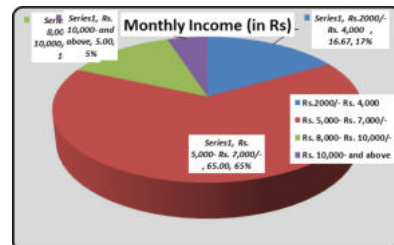


Figure-7: Distribution of patients with Hypertension according to monthly income

The above diagram depicts that, majority of patients with Hypertension income is between Rs 5000/- to Rs. 7,000/-. And 16.67% of patients with Hypertension earn between Rs 2000/- to Rs. 4,000/-. Then 13.33% earn between Rs 8,000/- to Rs. 10,000/-. Only 5% of families earn between Rs. 10,000/- and above.

Distribution of patients with Hypertension according to source of information

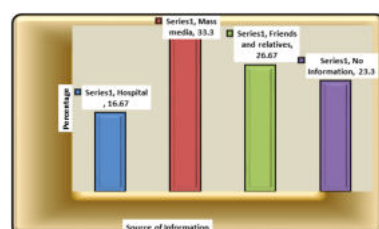
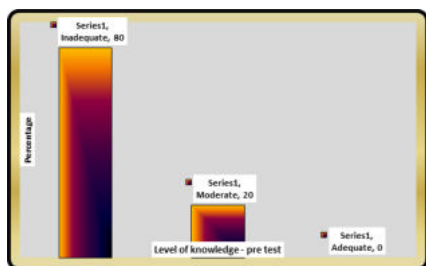


Figure-8: Distribution of patients with Hypertension according to source of information

The above diagram depicts, majority of patients with Hypertension i.e, 33.3% got information about prevention of coronary artery disease through mass media. 26.67% got information through friends and relatives. Then, 23.33% don't have information about prevention of coronary artery disease. Only 16.67% got information about prevention of coronary artery disease through hospital.

Objective 1: To assess the knowledge of patients with Hypertension regarding prevention of coronary artery disease before administering the Structured Teaching Programme (STP)

Classification of patients with Hypertension on pre-test knowledge level regarding prevention of coronary artery disease

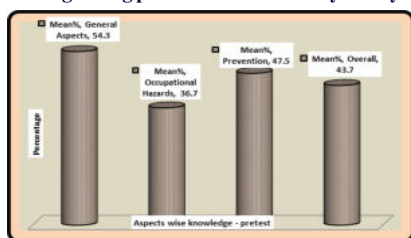
**Figure-9: Classification of patients with Hypertension on pre-test knowledge level regarding prevention of coronary artery disease****TABLE -1**

Classification of patients with Hypertension on pre-test knowledge level regarding prevention of coronary artery disease n=60

Level of knowledge	Score	No of Respondents	
		No	%
Inadequate	< 50%	48	80.00
Moderate	50--75%	12	20.00
Adequate	>75%	0	0.00
Total		60	100

The above table-1 and figure-12, shows the pre-test level of knowledge of patients with Hypertension on pre-test knowledge level regarding prevention of coronary artery disease. In the table it is noticeable that majority of patients with Hypertension 48(80%) had inadequate level of knowledge about prevention of coronary artery disease, whereas 12(20%) of patients with Hypertension had moderate level of knowledge and none of patients with Hypertension had adequate knowledge regarding prevention of coronary artery disease before administration of Structured Teaching Programme (STP).

Aspect wise pre-test mean knowledge scores of patients with Hypertension regarding prevention of coronary artery disease

**Figure-10: Aspect wise pre-test mean knowledge scores of patients with Hypertension regarding prevention of coronary artery disease****TABLE -2**

Aspect wise pre-test mean knowledge scores of patients with Hypertension regarding prevention of coronary artery disease n=60

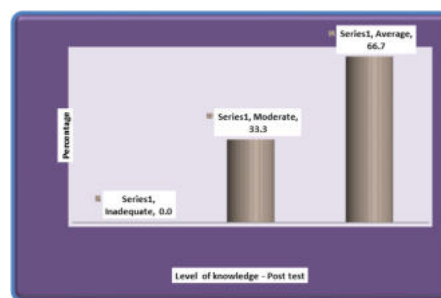
Domain	Max statements	Max Score	Range	Mean	SD	Mean %
Anatomy and physiology of heart	7	7	3--5	3.8	1.2	54.3

CAD- risk factors, causes and signs and symptoms	15	15	5--10	5.5	1.4	36.7
Prevention, management and prevention of coronary artery disease	8	8	2--4	3.8	1.2	47.5
Overall	30	30	9--16	13.1	2.3	43.7

The above table-2 describes the mean and standard deviation of knowledge score obtained by patients with Hypertension regarding prevention of coronary artery disease before administration of Structured Teaching Programme (STP). It is noticeable in the table that the patients with Hypertension had obtained significantly low score in each aspect of prevention of coronary artery disease before administration of Structured Teaching Programme (STP), that is score ranges from 9-16 with overall mean 13.1(43.7%) and standard deviation 2.3.

Objective 2: To assess the knowledge of patients with Hypertension regarding prevention of coronary artery disease after administering the Structured Teaching Programme (STP).

Classification of patients with Hypertension on post-test knowledge level regarding prevention of coronary artery disease

**Figure-11: Classification of patients with Hypertension on post-test knowledge level regarding prevention of coronary artery disease****TABLE -3**

Classification of patients with Hypertension on post-test knowledge level regarding prevention of coronary artery disease n=60

Level of knowledge	Score	No of Respondents	
		No	%
Inadequate	< 50%	0	0.00
Moderate	50--75%	20	33.33
Average	>75%	40	66.67
Total		60	100

The above table-3 and figure-13 shows, the post-test level of knowledge of patients with Hypertension on prevention of coronary artery disease, in which majority of patients with Hypertension 40(66.67%) had average level of knowledge about prevention of coronary artery disease, whereas 20(33.33%) of patients with Hypertension had moderate level of knowledge and none of patients with Hypertension had inadequate knowledge regarding prevention of coronary artery disease, after administration of Structured Teaching Programme (STP).

TABLE - 4 Aspect wise post-test mean knowledge scores of patients with Hypertension regarding prevention of coronary artery disease n=60

Domain	Max statements	Max Score	Range	Mean	SD	Mean %
Anatomy and physiology of heart	7	7	4--7	5.9	1.1	84.3
CAD- risk factors, causes and signs and symptoms	15	15	8--14	10.6	1.5	70.7

Prevention, management and prevention of coronary artery disease	8	8	3--7	6.3	0.9	78.8
Overall	30	30	11--23	22.8	2.7	76.0

The above table-4 and Fig-14 Shows that, the mean and standard deviation of knowledge score obtained by patients with Hypertension regarding prevention of coronary artery disease after administration of Structured Teaching Programme (STP). It is noticeable in the table that the patients with Hypertension have obtained significantly high score in each aspect of prevention of coronary artery disease after administration of Structured Teaching Programme (STP), that is score ranges from 11-23 with overall mean 22.8(76.0%) and standard deviation 2.7.

Aspect wise post-test mean knowledge scores of patients with Hypertension regarding prevention of coronary artery disease

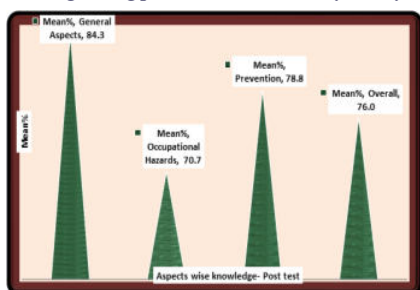


Figure-12: Aspect wise post-test mean knowledge scores of patients with Hypertension regarding prevention of coronary artery disease

Objective 3: To evaluate the effectiveness of Structured Teaching Programme (STP) to patients with Hypertension regarding the knowledge about prevention of coronary artery disease

TABLE-5: Comparison of knowledge of patients with Hypertension regarding prevention of coronary artery disease comparing pre-test with post-test

Level of knowledge	Score	Pre test		Post test	
		No	%	No	%
Inadequate	<50%	48	63.33	0	0.00
Moderate	50--75%	12	36.67	20	33.33
Adequate	>75%	0	0.00	40	66.67
Total	100	60	100	60	100

The above table shows the comparison of pretest and post-test knowledge of patients with Hypertension on prevention of coronary artery disease. The pre-test table depicts that, pre-test level of knowledge of patients with Hypertension on pre-test knowledge level regarding prevention of coronary artery disease. In the table it is noticeable that majority of patients with Hypertension 48(80%) had inadequate level of knowledge about prevention of coronary artery disease, whereas 12(20%) of patients with Hypertension had moderate level of knowledge and none of patients with Hypertension had adequate knowledge regarding prevention of coronary artery disease before administration of Structured Teaching Programme (STP).

The post-test table depicts that, post-test level of knowledge of patients with Hypertension on prevention of coronary artery disease, in which majority of patients with Hypertension 40(66.67%) had average level of knowledge about prevention of coronary artery disease whereas 20(33.33%) of patients with Hypertension had moderate level of knowledge and none of patients with Hypertension had inadequate knowledge regarding prevention of coronary artery disease after administration of Structured Teaching Programme (STP).

Hence the data reveals the effectiveness of Structured Teaching Programme (STP).

TABLE – 6 To evaluate the effectiveness of Structured Teaching Programme (STP) on prevention of coronary artery disease n=60

Domain	Mean	SD	Mean%	Unpaired 't' test
Anatomy and physiology of heart	2.1	0.89	30.0	18.2**
CAD- risk factors, causes and signs and symptoms	5.1	1.6	34.0	24.6**
Prevention, management and prevention of coronary artery disease	2.5	1	31.3	27.6**
Overall	9.7	2.2	32.3	34**

**Significant at P<0.01 level, df 59, t value 2

The above table-6 and Fig-14, depicts the mean and standard deviation of knowledge score obtained by patients with Hypertension in each aspect of prevention of coronary artery disease after the administration of the Structured Teaching Programme (STP) with mean of 11.2, S.D of 2.9 and mean% of 37.33. The table shows that patients with Hypertension had scored more in Anatomy and physiology of heart, CAD- risk factors, causes and signs and symptoms and Prevention, management and prevention of coronary artery disease after the administration of structured teaching programme and are significant at p<0.001 level, df 59, (t-2) by unpaired 't' test.

Effectiveness of Structured Teaching Programme (STP) on prevention of coronary artery disease

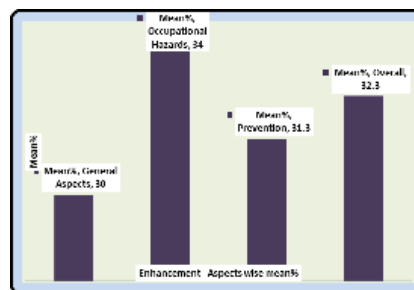


Fig-13: Effectiveness of Structured Teaching Programme (STP) on prevention of coronary artery disease

Objective-4: To examine association between the level of knowledge and selected socio demographic variables of patients with Hypertension towards prevention of coronary artery disease

Table – 7: Association Between Demographic Variables And Pre-test Knowledge Level Of Patients With Hypertension Towards Prevention Of Coronary Artery Disease n=60

S.N o	Demographic variables	No	%	Knowledge				Chi- square
				≤ Median (31)		> Median (29)		
				No	%	No	%	
1	Age in years							
	a) 30-40 years	12	20.0	6	50	6	50	4
	b) 41-50 years	18	30.0	11	61.1	7	38.9	df 3
	c) 51-60 years	21	35.0	12	57.1	9	42.9	N.S
	d) Above 60 years	9	15.0	2	22.2	7	77.8	
2	Gender							
	a) Male	43	71.7	21	48.8	22	51.2	0.5
	b) Female	17	28.3	10	58.8	7	41.2	df 1
3	Religion							
	a)Hindu	38	63.3	24	63.2	14	36.8	5.99
	b) Christian	10	16.7	4	40.0	6	60.0	df 2
	c) Muslim	12	20.0	3	25.0	9	75.0	S
	d) Others	0	0.0	0	0.0	0	0.0	
4	Educational qualification							
	a) Illiterate	4	6.7	4	100	0	0.0	11.8
	b) Primary school	14	23.3	9	64.3	5	35.7	df 3

c) High school	20	33.3	12	60.0	8	40.0	S
d) PUC	18	30.0	6	33.3	12	66.7	
e) Degree and above	4	6.7	0	0.0	4	100	
5 Marietal status							
a) Married	42	70.0	26	61.9	16	38.1	5.8
b) Unmarried	18	30.0	5	27.8	13	72.2	df 1
c) Divorced	0	0.0	0	0.0	0	0.0	S
6 Occupation							
a) Agriculture	8	13.3	5	62.5	3	37.5	8.2
b) Self-employed	28	46.7	19	67.9	9	32.1	df 2
c) Privare	24	40.0	7	29.2	17	70.8	S
d) Government	12	20.0	5	41.7	7	58.3	0.6
7 Monthly Income							
a) Rs.2000/- Rs. 4,000	10	16.7	6	60.0	4	40.0	4.5
b) Rs. 5,000- Rs. 7,000/-	39	65.0	22	56.4	17	43.6	df 3
c) Rs. 8,000- Rs. 10,000/-	8	13.3	3	37.5	5	62.5	N.S
d) Rs. 10,000- and above	3	5.0	0	0.0	3	100.0	
8 Source of Information							
a) Hospital	10	16.7	6	60.0	4	40.0	1.9
b) Mass media- T.V, Journals, News paper etc.	20	33.3	9	45.0	11	55.0	df 3
c) Friends and relatives	16	26.7	7	43.8	9	56.3	N.S
d) No Information	14	23.3	9	64.3	5	35.7	
N.S-Not Significant S- Significant at P<0.05 level							

Table-7 shows the association of knowledge level of patients with Hypertension towards prevention of coronary artery disease before administering the structured teaching programme with their selected demographical variables, using Chi –square test. The analysis revealed that there is significant association was found with – religion, educational qualification, marital status and occupation at $p < 0.05$ and no association could be found with other demographic variables of patients with hypertension.

V. CONCLUSION

The results of the study shown that pre-test overall knowledge score of patients with hypertension on prevention of coronary artery disease was 43.7%, mean and the standard deviation was 2.3. During post-test overall knowledge score of patients with hypertension on prevention of coronary artery disease was 76.0% mean and standard deviation was 2.7. Hence the difference between pre-test and post-test overall knowledge score was 32.3%. So, the results of the study shown the difference between the pre-test and post-test knowledge score of patients with hypertension on prevention of coronary artery disease was statistically significant and the difference is due to the administration of STP to patients with hypertension on prevention of coronary artery disease.

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